

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A solid state imaging device comprising:

a solid state image pickup device having an effective pixel region in one surface thereof;

a light-transparent cover arranged opposite to said effective pixel region and having planar dimensions smaller than those of said solid state image pickup device;

an adhering section, which is made of resin overall, for adhering said solid state image pickup device and said light-transparent cover; and

connection terminals disposed on said solid state image pickup device, said adhering section disposed at least in a portion of a region where said cover opposes said pickup device and such that said connection terminals are exposed

wherein a space is formed between from said effective pixel region and to said light-transparent cover, and the adhering section is formed outside the effective pixel region in the one surface of the solid state image pickup device.

2. (Original) A solid state imaging device according to Claim 1, wherein said adhering section contains photosensitive adhesive.

3. (Previously Presented) A solid state imaging device according to Claim 2, wherein said adhering section is formed outside said effective pixel region in said one surface of said solid state image pickup device.

4. (Original) A solid state imaging device according to Claim 3, wherein said adhering section seals the outer periphery of said space.

5. (Previously Presented) A solid state imaging device according to Claim 1, wherein said adhering section is formed outside said effective pixel region in said one surface of said solid state image pickup device.

6. (Currently Amended) A semiconductor wafer on which a plurality of solid state image pickup devices each having an effective pixel region in one surface thereof are formed, comprising:

a light-transparent plate arranged opposite to said effective pixel region and having planar dimensions smaller than those of said solid state image pickup device;

an adhering section, which is made of resin overall, for adhering said solid state image pickup device and said light-transparent plate; and

connection terminals disposed on said solid state image pickup device, said adhering section disposed at least in a portion of a region where said plate opposes said pickup device and such that said connection terminals are exposed

wherein a space is formed between from said effective pixel region and to said light-transparent plate, and the adhering section is formed outside the effective pixel region in the one surface of the solid state image pickup device.

7. (Original) A semiconductor wafer according to Claim 6, wherein said light-transparent plate is divided so as to form light-transparent covers each having planar dimensions smaller than those of said solid state image pickup device.

8. (Original) A semiconductor wafer according to Claim 7, wherein said adhering section contains photosensitive adhesive.

9. (Previously Presented) A semiconductor wafer according to Claim 7, wherein said adhering section is formed outside said effective pixel region in said one surface of said solid state image pickup device.

10. (Original) A semiconductor wafer according to Claim 6, wherein said adhering section contains photosensitive adhesive.

11. (Currently Amended) A semiconductor wafer on which a plurality of solid state image pickup devices each having an effective pixel region in one surface thereof are formed, comprising:

a light-transparent cover arranged opposite to said effective pixel region and having planar dimensions smaller than those of said solid state image pickup device;

an adhering section, which is made of resin overall, for adhering said solid state image pickup device and said light-transparent cover; and

connection terminals disposed on said solid state image pickup device, said adhering section disposed at least in a portion of a region where said cover opposes said pickup device and such that said connection terminals are exposed

wherein a space is formed between from said effective pixel region and to said light-transparent cover, and the adhering section is formed outside the effective pixel region in the one surface of the solid state image pickup device.

12. (Original) A semiconductor wafer according to Claim 11, wherein said adhering section contains photosensitive adhesive.

13. (Previously Presented) A semiconductor wafer according to Claim 12, wherein said adhering section is formed outside said effective pixel region in said one surface of said solid state image pickup device.

14. (Original) A semiconductor wafer according to Claim 13, wherein said adhering section seals the outer periphery of said space.

15. (Previously Presented) A semiconductor wafer according to Claim 11, wherein said adhering section is formed outside said effective pixel region in said one surface of said solid state image pickup device.

16. (Currently Amended) An optical device module comprising: a lens; a lens retainer for retaining said lens; and a solid state imaging device; wherein

said solid state imaging device comprises:

a solid state image pickup device having an effective pixel region in one surface thereof; a light-transparent cover arranged opposite to said effective pixel region and having planar dimensions smaller than those of said solid state image pickup device;

an adhering section, which is made of resin overall, for adhering said solid state image pickup device and said light-transparent cover; and

connection terminals disposed on said solid state image pickup device, said adhering section disposed at least in a portion of a region where said cover opposes said pickup device and such that said connection terminals are exposed; and wherein

said light-transparent cover is arranged opposite to said lens and inside said lens retainer wherein a space is formed between from said effective pixel region and to said light-transparent cover, and the adhering section is formed outside the effective pixel region in the one surface of the solid state image pickup device.

17. – 29. (Canceled).

30. (Currently Amended) An optical device module comprising:
a wiring board on which wiring is formed;
an image processor adhered to said wiring board and electrically connected to said wiring;
a solid state imaging device in which a light-transparent cover having planar dimensions smaller than those of a solid state image pickup device is adhered through an adhering section, which is made of resin overall, opposite to an effective pixel region in one surface of said solid state image pickup device, and which is adhered to said image processor and electrically connected to said wiring,
wherein a space is formed between from said effective pixel region and to said light-transparent cover, and the adhering section is formed outside the effective pixel region in the one surface of the solid state image pickup device;

connection terminals disposed on said solid state image pickup device, said adhering section disposed at least in a portion of a region where said cover opposes said pickup device and such that said connection terminals are exposed; and

an optical path defining unit arranged opposite to said solid state imaging device and defining an optical path to said solid state imaging device.

31. (Original) An optical device module according to Claim 30, wherein said optical path defining unit retains a lens arranged opposite to said light-transparent cover of said solid state imaging device.

32. (Currently Amended) An optical device module comprising:
a solid state imaging module component formed by resin-sealing: a module component wiring board on which wiring is formed; an image processor adhered to said module component wiring board and electrically connected to said wiring; and a solid state imaging device in which a

light-transparent cover having planar dimensions smaller than those of a solid state image pickup device is adhered through an adhering section, which is made of resin overall, opposite to an effective pixel region in one surface of said solid state image pickup device, and which is adhered to said image processor and electrically connected to said wiring; in a state that the surface of said light-transparent cover is exposed,

wherein a space is formed between from said effective pixel region and to said light-transparent cover, and the adhering section is formed outside the effective pixel region in the one surface of the solid state image pickup device;

connection terminals disposed on said solid state image pickup device, said adhering section disposed at least in a portion of a region where said cover opposes said pickup device and such that said connection terminals are exposed; and

an optical path defining unit arranged opposite to said solid state imaging device and defining an optical path to said solid state imaging device.

33. (Original) An optical device module according to Claim 32, wherein an external terminal connected to said wiring is formed on the surface of said module component wiring board reverse to the surface to which said image processor is adhered.

34. (Original) An optical device module according to Claim 33, wherein said external terminal has a protruding shape.

35. (Original) An optical device module according to Claim 33, wherein said optical device module further comprises a wiring board on which wiring is formed, and wherein said external terminal of said module component wiring board is connected to said wiring of said wiring board.

36. (Original) An optical device module according to Claim 32, wherein said optical path defining unit retains a lens arranged opposite to said light-transparent cover of said solid state imaging device.

37. (Currently Amended) An optical device module comprising:
a wiring board on which wiring is formed;
an image processor adhered to said wiring board and electrically connected to said wiring;

a solid state imaging device in which a light-transparent cover having planar dimensions smaller than those of a solid state image pickup device is adhered through an adhering section, which is made of resin overall, opposite to an effective pixel region in one surface of said solid state image pickup device, and which is adhered to said image processor and electrically connected to said wiring,

wherein a space is formed between from said effective pixel region and to said light-transparent cover, and the adhering section is formed outside the effective pixel region in the one surface of the solid state image pickup device;

connection terminals disposed on said solid state image pickup device, said adhering section disposed at least in a portion of a region where said cover opposes said pickup device and such that said connection terminals are exposed;

a sealing section for resin-sealing said wiring board, said image processor, and said solid state imaging device in a state that the surface of said light-transparent cover is exposed; and

an optical path defining unit arranged opposite to said solid state imaging device and defining an optical path to said solid state imaging device.

38. (Original) An optical device module according to Claim 37, wherein said optical path defining unit retains a lens arranged opposite to said light-transparent cover of said solid state imaging device.

39 – 47. (Canceled)

48. (Original) A solid state imaging device according to Claim 1, wherein said adhering section comprises resin.

49. (Original) A solid state imaging device according to Claim 1, wherein said adhering section is set by light and heat.

50. (Original) A solid state imaging device according to Claim 1, wherein said light-transparent cover is planar.

51. (Original) A solid state imaging device according to Claim 50, wherein said adhering section seals said light-transparent cover to said solid state image pickup device.

52. (Currently Amended) A solid state imaging device comprising:
a solid state image pickup device having an effective pixel region in one surface thereof;
a light-transparent cover arranged opposite to said effective pixel region and having planar dimensions smaller than those of said solid state image pickup device;
an adhering section, which is made of resin overall, for adhering said solid state image pickup device and said light-transparent cover; and
connection terminals disposed on said solid state image pickup device, said adhering section disposed at least in a portion of a region where said cover opposes said pickup device and such that said connection terminals are exposed
wherein a space is formed between from said effective pixel region and to said light-transparent cover, and the adhering section is formed outside the effective pixel region in the one surface of the solid state image pickup device, the space allowing incoming light to pass through said light-transparent cover to be incident directly on said effective pixel region.

53. (Previously Presented) A solid state imaging device according to Claim 6, wherein the space formed between said effective pixel region and said light-transparent cover allows incoming light passing through the light-transparent cover to be incident directly on the effective pixel region.

54. (Previously Presented) A solid state imaging device according to Claim 11, wherein the space formed between said effective pixel region and said light-transparent cover allows incoming light passing through the light-transparent cover to be incident directly on the effective pixel region.

55. (Previously Presented) A solid state imaging device according to Claim 16, wherein the space formed between said effective pixel region and said light-transparent cover allows incoming light passing through the light-transparent cover to be incident directly on the effective pixel region.

56. (Previously Presented) A solid state imaging device according to Claim 30, wherein the space formed between said effective pixel region and said light-transparent cover allows incoming light passing through the light-transparent cover to be incident directly on the effective pixel region.

57. (Previously Presented) A solid state imaging device according to Claim 32, wherein the space formed between said effective pixel region and said light-transparent cover allows incoming light passing through the light-transparent cover to be incident directly on the effective pixel region.

58. (Previously Presented) A solid state imaging device according to Claim 37, wherein the space formed between said effective pixel region and said light-transparent cover allows incoming light passing through the light-transparent cover to be incident directly on the effective pixel region.